

NEW FISHES IN THE QUEENSLAND MUSEUM.

BY CHAS. W. DE VIS, M.A.

No. 5.

ATHERINICHTHYS PUNCTATUS.

D. 6, 1/9. A. 1/10. Lat. 35.

The height of the body is $6\frac{1}{4}$, the length of the head $4\frac{1}{3}$ in the total length. Orbit 3, snout nearly the same, interorbit $2\frac{1}{3}$ in the length of the head. Habit much that of a young mullet. The origin of the first dorsal is in the middle of the length, s.c. The space between the dorsals equals that between the second and the caudal. The origin of the anal is in advance of that of the second dorsal. The ventral rises between the pectoral and the first dorsal. The cleft of the mouth extends to below the anterior nostril. Teeth minute. Upper jaw the longer. Pinky yellow. The lateral band blue edged above. Scales of the upper parts edged with dots. Tip of the snout nearly black with a group of close spots behind it. A black dot on the lower edge of the base of the pectoral.

Locality, Cape York. Collected by Mr. K. Broadbent.

MUGIL CONVEXUS.

D. 4, 1/8. A. 3/10. Lat. 34. Tr. 11-12.

The height of the body is 4, the length of the head 5 in the total length. Orbit $4\frac{1}{2}$, snout 4, interorbit $2\frac{1}{2}$, pectoral $1\frac{1}{4}$ in the length of the head. No. adipose eyelid. Upper profile convex, lower nearly straight. Head narrow. Snout rather pointed. No pectoral axillary scale. Maxillary exposed throughout its length. Preorbital strongly serrated behind and in front. Jaws with fine close set teeth. About 27 scales between the dorsal and the

interorbit, the rest of the head naked. The pectoral rises rather below the angle of the operculum, the ventral below the posterior third of the pectoral. The first dorsal over the tip of the ventral. The second dorsal considerably behind the anal. The height of the caudal peduncle at its greatest is equal to its length. The free space on the chin is broadly lanceolate. Colour entirely silvery. Operculum golden. No markings.

Length, 8 inches. Locality, Cardwell.

The "Mangrove Mulletts" of the Brisbane fishermen are *M. tade* Forsk and *M. longimanus*, Gth.

MUGIL MARGINALIS.

D. 4, $\frac{1}{8}$. A. $\frac{3}{8}$. Lat. 40-41. Tr. 13.

The height of the body and length of the head are $4\frac{3}{4}$ in the total length. Orbit $3\frac{1}{3}$, snout $4\frac{1}{3}$, interorbit $2\frac{3}{4}$ in the length of the head. Pectoral $\frac{2}{3}$, caudal peduncle $2\frac{1}{2}$, first dorsal spine less than 2 in the same. The adipose membrane broad fore-and-aft with a gelatinous mass on the snout and pre-operculum. Upper lip thin. Hinder nostril much nearer to the eye than to the snout. Preorbital entire in front tapering to an obtuse point, slightly armed behind. Maxillary uncovered. Mandibular angle rather more than a right angle. Cleft of the mouth twice as broad as long. Free space behind the chin very broad. The opercles widely separate behind. First dorsal midway between the snout and the base of the caudal. The 11th scale corresponds with the tip of the pectoral and origin of the first dorsal. The twenty-third with the origin of the second dorsal. There are about 25 scales between the snout and the origin of the dorsal. The pectoral is above the middle of the height, rather above the angle of the operculum. It has no axillary scale. Origin of ventral nearer to the pectoral than to the dorsal. Second dorsal and anal nearly on the same parallel. Caudal moderately forked. Second dorsal spine the longest. Head thick, obtuse; scales over it concentrically striated. Body with alternate clear and clouded lines. An obscure blue spot on the base of the pectoral. Dorsals and caudal with a broad dark and narrow black edge.

Length, $5\frac{1}{2}$ inches. Locality, Brisbane.

In a younger example there are differences which might mislead. The mandibular angle is acute and the lower jaw much longer in proportion; the free space much narrower, the opercles nearly meeting behind, the head is more pointed and longer than the height of the body. There is a large dark patch in the middle of the caudal, another in that of the soft dorsal and a streaky one on the spinous dorsal.

The affinities of the species seem to be with *M. cephalotus* on the one hand and *M. gelatinosus* on the other.

MUGIL SPLENDENS.

D. $4\frac{1}{8}$. A. $3\frac{1}{9}$. Lat. 40. Tr. 12.

The height of the body is $4\frac{1}{2}$, the length of the head 5 in the total length. Orbit and snout $4\frac{1}{2}$, interorbit $1\frac{1}{2}$ in the length of the head.

No adipose eyelid, the eye in spirits covered with an opaque membrane. No teeth. Lower lip strongly ciliated. No free space under the chin. The lower end of the maxillary is visible at the angle of the mouth. The preorbital is strongly serrated on its posterior limb. Twenty-one series of scales between the snout and the first dorsal. The root of the pectoral is level with the upper angle of the operculum; it has a moderately long axillary scale and reaches nearly to the origin of the dorsal. The dorsals rise opposite the 13th and 25th scale rows, the anal opposite the second dorsal. Elongated scale of first dorsal $\frac{2}{3}$ of the first spine, that of the ventral short.

Colour golden, rather greyish on the back and yellow on the lower part of the head. The scales with shining margins. The duller centres produce longitudinal bands changing their position as the incidence of the light is altered. Pectoral with a bright yellow elongated spot across the base, above it a black spot extended on the edge of the fin.

Length, 10 inches. Locality, Cardwell.

AMPHISILE CRISTATA.

D. $3\frac{1}{9}$. A. 14. C. 10. V. 7. P. 11.

The height of the body is 5, the length of the head $1\frac{3}{4}$ in the length from the snout to the base of the caudal fin. Snout one-fourth longer than the height of the body. The distance of the pectoral from the operculum is thrice the distance of the latter (i.e., its posterior edge) from the orbit. There are six vertebral shields, the sutures indistinct, simple, and five lateral shields with no suture along the vertebral line. The operculum is very little broader than high. The humeral does not nearly extend to the base of the pectoral. There is no longitudinal groove on the head, the sharp edge of the nostral is continued to the first vertebral shield. The top of the root of the pectoral is on the upper third of the body. The first and second super-abdominal shields are equal in size and as high as broad. The cuirass covers two-thirds of the height of the body and is equal in height to the caudal peduncle. Profile regularly convex from the snout to the caudal. There are three radiating dorsal spines, but the tip of the cuirass being lost its appendages remain to the ascertained.

Length, 11 inches. A dry specimen picked up on the beach at Noosa and not in good condition, but the absence of serrated sutures between the plates, length of the thorax, ridged crown, &c., are in the present state of our knowledge of these remarkable fish, sufficient to separate it from *A. scutata*. Linn.

HEPTADECANTHUS BREVIPINNIS.

D. 17/15. A. 2/14.

The height of the body is less than 2, the length of the head 4 times in the total length. Profile of head regularly subconvex, of nape gibbous. Operculum entire, preoperculum serrated, preorbital finely serrated. The pectorals reach the third scale row from the anal. The lateral line reaches the middle of the soft dorsal. The first ray of the ventral elongated, filiform. Caudal forked. Colour nearly uniform greenish brown, a little clouded with darker.

Upper rays of pectoral and soft portion of dorsal, lobes and middle rays of caudal and a few rays of spinous part of dorsal with dark brown specks.

Length, $4\frac{1}{2}$ inches. Locality, Queensland Coast.

HEPTADECANTHUS MACULOSUS

D. 17/15. A. 2/16.

The height of the body is 2 or less in the length s.c., $2\frac{3}{5}$ c.c. Head $4\frac{2}{3}$ in the total. Orbit 3, snout 4 nearly, interorbit 3, in the length of the head. The pectorals and ventrals reach nearly to the anus. Preopercule and preorbital finely serrated. Caudal deeply forked.

Colour, anterior two thirds of body greenish brown with lines of dark brown (blue) spots on each side. Similar spots on operculum cheeks, and chest. Posterior third of body greenish grey. Spinous part of dorsal dark brown.

Length, 4 inches. Locality, Cardwell.

The profile, especially of the head, is much lower down than in *H. longicaudis*. MacI.

POMACENTRUS SUBNIGER.

D. 12/16. A. 2/13. Lat. 34. Tr. 3/10.

The height of the body is $2\frac{1}{2}$ in the total length. Infraorbital denticulated. Dorsal spines lengthening to the fifth, the rest equal to it. Second anal spine very long and strong, as long as the breadth of the base of the caudal peduncle. Caudal sublobed.

Colour murky black. Scales with some obscure pearly markings.

Length, $4\frac{1}{2}$ inches. Locality, Cardwell.

POMACENTRUS PROSOPOTENIA. Blk.

Locality, Cardwell.

POMACENTRUS PROFUNDUS.

D. 12/14. A. 2/15. Lat. 28. Tr. 3/9.

The height of the body is $1\frac{1}{5}$ in the length s.c. Preorbital with a notch in front and a hook posteriorly. One or two small teeth

on the infraorbital and one on the opercle. Preopercle sharply toothed, the teeth larger at the angle. Profile above regular and very convex, below deep beneath the postabdomen. Eye large, $2\frac{1}{2}$ in the length of the head.

Colour uniform pale yellowish brown.

Length, 2 inches. Locality, Barrier Reef.

POMACENTRUS APICALIS.

D. 13/14-15. A. 2/13. Lat. 26-28. Tr. 3/11.

The height of the body is $2\frac{4}{5}$ in the total length. Dorsal spines behind the third sub-equal in length. Second anal spine equals the third dorsal and half the length of the head nearly. Preorbital denticulations broad and flat near the angle. Caudal deeply forked, lobes slightly rounded, upper one the largest. Profile of nape elevated.

Colour uniform greenish brown. The soft dorsal narrowly and the upper lobe of the caudal broadly tipped with white.

Length, $4\frac{1}{2}$ inches. Loc., Barrier Reef.

A *Pomacentrus* also from the Barrier Reef, having a height of $2\frac{1}{3}$ in the total length, differs from the preceding species not only in its shortened proportions but in having a black blotch between the 2nd and 4th dorsal spines. It may possibly be distinct.

POMACENTRUS FRENATUS.

D. 13/14-15. A. 2/13-14. Lat. 25. Tr. 3/8.

The height is $2\frac{3}{4}$ in the total length. Infraorbital denticulated without stronger teeth anteriorly. Dorsal spines gradually lengthening posteriorly. Caudal emarginate with rounded lobes. Operculum with a short spinous tooth. Upper teeth with a basal lobe.

Colour pale yellowish green. Between the eyes two transverse lines curving strongly forward. On the cheek two straight lines from the upper part of the preopercle to the angle of the mouth and a line of spots below them. Opercle with spots, dashes, and curved streaks. Scales of the body below the lateral line each with a vertical line on the base extending to the scales above and below it. On the scales above the lateral line posteriorly, small round

spots extending a little on the base of the soft dorsal. Base of caudal and pectoral similarly spotted. A very obscure brown patch on the base of the first four dorsal rays. A dark brown axillary spot and an obscure bluish spot on the origin of the lateral line.

Length, 5 inches. Locality, Cardwell.

GLYPHIDODON EXPANSUS.

D. 13/13. A. 2/11. Lat. 32. Tr. 3/8.

The height of the body is rather more than $\frac{1}{2}$ of the length s.c. Interorbit flat. Profile symmetrically concave above and below. Three series of scales on the cheeks. Preorbital not half the breadth of the orbit. Infraorbital narrow merging gradually into the preorbital.

Colour uniform blueish silvery. Fins darker. Hinder part of the dorsal and anal whitish, with the rays minutely dotted black.

Length, $2\frac{1}{4}$ inches. Locality, Barrier Reef.

ONAR N.G. POMACENTRIDÆ ?

Pungent spines of the dorsal few. Dentition labroid, none of the bones of the head curved. Scales ctenoid. Lateral line resumed. Branchiostegals five.

ONAR NEBULOSUM.

D. 2/17. A. 3/14. Lat. 46. Tr. 3/14.

The height of the body is $4\frac{1}{3}$, the length of the head 4 in the total length. Orbit 3 in the length of the head.

Lower lateral teeth short, stout, conical close set, canines one pair in front. Upper laterals small transversely compressed on edge of the jaw, canines, two pairs, small. The first two rays of the dorsal the shortest, pungent, the rest flexible. Lateral line ending beneath the soft dorsal on the 32nd scale and resumed below on the 36th. Lower jaw protruding and teeth exposed. Lips thin, cheeks with five rows of scales, caudal scaly at base. Dorsal a little scaly at posterior end. Brownish black, each scale with a round black spot at the base. Fins black.

Locality, Murray Island. Collected by Mr. K. Broadbent.
This form seems a link between the Pomacentridæ and Labridæ.

CHÆROPS ALBIGENA.

D. 13/7. A. 3/10. Lat. 29. Tr. 3/8.

The height of the body is less than a third, the length of the head less than a fourth of the total length. Snout and preorbital $2\frac{2}{3}$ in the length of the head. Scales of cheeks not imbricated, caudal truncate, no posterior canines. Violet brown, chin yellowish white; anal with four pale longitudinal bands. A dark blotch (sometimes obsolete) on the back beneath the ninth dorsal spine.

Locality, Cape York. Collected by Mr. K. Broadbent.

CHÆROPS OLIVACEUS.

D. 13/7. A. 3/10. Lat. 28. Tr. $3\frac{1}{2}/8\frac{1}{2}$.

No posterior canine. Scales of the cheeks rudimentary in regular distant rows. Preorbital (from snout to orbit) $\frac{1}{2}$ of the length of the head. Preoperculum entire.

Colour (in spirits) olive green to rosy green on the post abdomen, anterior portion of the base of the anal pale with 3 rose coloured bands and another along the base. A pale blotch beneath the posterior half of the soft dorsal.

Length, 2 inches. Locality, Barrier Reef (Cardwell), Cape York.

The living fish appears to be streaked with red on the abdomen and lower half of the caudal peduncle.

CHÆROPS CONCOLOR.

D. 13/7. A. 3/10. Lat. 27. Tr. 2/8.

No posterior canine. Serrature of preopercle distinct. Head longer than high, snout pointed. Preorbital high $2\frac{4}{5}$ in the length of the head. Scales on the cheeks not imbricate.

Colour uniform greenish brown (dry). Caudal with numerous faint brown bars near the tips. Anal with two or three pale longitudinal bands.

Length, $5\frac{1}{2}$ inches. Locality, N. E. Coast.

CHÆROPS UNIMACULATUS.

D. 13/7. A. 3/10. Lat. 27. Tr. 2/8.

No posterior canine. Serrature of preopercle rather coarse. Head much longer than high. Snout obtuse. Preorbital $\frac{1}{3}$ in the length of the head. Scales on the cheeks not imbricate.

Colour light brown (in spirits) with hardly appreciable broad cross bands. Fins immaculate. A bright oval spot below the end of the soft dorsal. Middle of the operculum rather bright.

In a younger example the body and preorbital are somewhat less deep; the general colour darker, nearly black at the root of the caudal and round the oval spot and the end of the upper lobe of the caudal numerous short dark brown bars composed of spots on the rays.

Length, 4 inches. Locality, Barrier Reef.

CHÆROPS PERPULCHER.

D. 13/7. A. 3/10. Lat. 28. Tr. 3 $\frac{1}{2}$ /10.

No posterior canines. Preoperculum entire. Cheeks with a few embossed scales towards the limb of the preopercle. Caudal very rounded or a little produced in the middle. Canines $\frac{1}{4}$, the outer lower pair very long outwardly curved. The middle upper long curved forwards.

Colour, recent, forehead from upper lip to nape blue crossed by narrow orange lines. Chin with blue descending lines. Between nape and dorsal flame red. Opercula with small orange spots enlarging posteriorly. A blue line across the base of the pectoral a few others above the the axil. Behind the pectoral an indistinct dark oblique band. Last ray of pectoral bright blue edged with cinnamon. Body bluish green, base of most of the scales blue. Dorsal edged with cinnamon with the free tips blue, base yellowish, above it oblique blue streaks and a blue longitudinal band. Anal bright blue at the base, pale yellow in the middle, near the margin pale blue with golden spots. Tail blue with broad close wavy yellowish brown bands. Teeth blue.

In spirits the colours mostly disappear, in dry specimens almost entirely.

Length to 14 inches. Locality, Moreton Bay.

CHICEROPS GRAPHICUS.

D. 13/7. A. 3/9-10. Lat. 27-28. Tr. 3/9.

The height of the body is 3 to $3\frac{1}{2}$, the length of the head 4 nearly in the total length. Orbit 5, snout less than 3, interorbit 4 in the length of the head. No posterior canine. Preoperculum not serrated. Scales of the cheeks in 8 series, subimbricate. Preorbital $2\frac{1}{2}$ to $3\frac{1}{4}$ in the length of the head. Yellowish grey to brown with seven or eight broad black cross bands confluent in the middle or on the dorsum. In one example a distinct black spot on the lateral line opposite the 6th and 7th dorsal spine. Teeth blue. Fins immaculate.

Length to 14 inches. Locality, Queensland Coast (Cardwell.)

COSSYPHUS LATRO.

D. 12/9. A. 3/11. Lat. 33. Tr. 5/12.

The height of the body is $3\frac{1}{2}$, the length of the head $3\frac{1}{2}$ in the total length. Orbit 7 preorbital $3\frac{1}{2}$ in the length of the head. Ventral $\frac{3}{4}$ of the height of the body. Both limbs of the preoperculum naked and entire. Nine series of scales on the cheeks decreasing to four behind the orbit. Lateral teeth of lower jaw distinct and large. Caudal rounded in the middle edge, the lobes elongated. Ventrals with the outer rays gradually elongated. The eight anterior spines of the dorsal without scales at the base, increasing in length to the 4th and 5th, then decreasing, the ninth one third longer, and together with the rest of the fin and the anal scaly at the base. The first dorsal spine stands over the middle of the pectoral.

Colour of body (dry) yellowish. The scales margined with grey, and each with a dark medial streak near the tip constituting continuous lines. The eight anterior dorsal spines and webs black. A black blotch at the base of the middle caudal web, another on the base of the pectoral. Ventral streaked longitudinally with black.

Length, 20 inches. Locality, Moreton Bay.

LABRICHTHYS GUNTHERI. Blk.

A fish occurs in Moreton Bay which may possibly be the one named by Dr. Bleeker, *L. Guntheri*. If it be so it is either variable in colouring to an unusual extent or it has suffered from a too imperfect description. Though I should prefer to think the latter alternative impossible so much doubt remains in my mind as to the identity of the fish with *L. Guntheri* that I venture to give its characters.

Lat. 26.

Posterior canine very small. Cheek with four series of scales. Tubercles of lateral line unifurcate. Canines $\frac{3}{4}$? Caudal slightly rounded with the lobes a little produced.

Recent colour, green, in one specimen rosy green on the trunk, oil green on the back, blue green on mouth and chest, yellowish green on the base of the caudal. Six red stripes radiate from the eye, the upper postorbital one extending on the body, above it a broader red band traversing nine cross bands which are more distinct above the longitudinal band and extend on the base of the dorsals. From the angle of the mouth a red band running beneath the pectoral to the abdomen. Base of the caudal with two oblique blotches, the hinder half golden brown with the webs stained with purple. Spinous dorsal red between the first three spines, with a black blotch in the centre and the base yellow. Soft dorsal mingled green and red, the red predominating posteriorly and forming a broad margin. Anal with three red longitudinal bands and a sky-blue margin. Pectoral red with a black axillary spot. Throat golden brown, the preopercle and opercle tinged with the same. The upper teeth consists of a pair evidently canines, the next on each side very much smaller, can only rank as the first of the diminishing series behind it.

LABRICHTHYS CRUENTATUS.

Lat. 27.

A posterior canine. Scales of the cheeks in four series, the upper two the larger. Canines two above and probably four below. Tubules of scales twice, or once dichotomous, caudal truncate.

Colour, recent, reddish olive with stains of crimson on the base of pectoral, and on the dorsal and anal especially along their bases. Rest of the fins green. A spot on the axil and one between the 3rd and 4th dorsal spines deep blue. Pectoral and upper lip pinky yellow.

Length, 7 inches. Locality, Moreton Bay. Collected by Captain Towneley, St. Helena.

LABRICHTHYS SEXLINEATUS.

A posterior canine. Scales of the cheeks in three series. Canines $\frac{2}{4}$. Tubules of scales bifid. Caudal truncate.

Colour, (in spirit) upper half of the web between the first three dorsal spines black, an obscure dark blotch on the base of the caudal above and below, a black stripe along the back from the upper part of the orbit, two on the side converging towards the orbit and continued as one on the snout, the upper commencing on the caudal peduncle as black spots, the other vanishing beneath the pectoral, the fourth obscure, from the infra orbital to the base of the pectoral, the fifth from the angle of the preoperculum passes below the pectoral to the abdomen, the sixth on the chest and abdomen. Two obscure stripes on the lower side of the caudal peduncle. Dark blotches on the anterior part of the web of the soft dorsal, above them a faint narrow dark band.

Length, 4 inches. Locality, Barrier Reef.

LABRICHTHYS REX.

Lat. 26.

A posterior canine. Six rows of scales on the cheeks, two behind the orbit. Caudal subconcave, lobes a little prolonged. Canines $\frac{2}{4}$.

Colour, recent, olive brown to olive grey, stained more or less with pink with six indistinct subvertical bands across the trunk. Two oblique bands converging towards the end of the caudal peduncle and a broad one across the middle of the caudal. A broad black band on the centre of the first four dorsal webs and spines. Soft dorsal pink with or without three cloudy patches at the base. Anal pink posteriorly. A greater or less pink patch on the cheek. Two dark lines from the orbit to the lips and two

running backwards to the edge of the opercle. A black axillary spot. A line from the angle of the mouth to the side of the chest.

In spirits variable, more or less of the pink stainings being destroyed, a little on the dorsal and anal however usually remains. In pale specimens the lower postorbital line is undulated on the opercle or both lines are continued as longitudinal bands along the back.

Length 5 inches. Locality, Moreton Bay. Collected by Captain Townley, St. Helena.

LABRICHTHYS MACULATUS.

Lat. 27.

A posterior canine. Scales of the cheeks in four series. Canines $\frac{2}{4}$. Caudal short, truncate. Tubules of lateral line widely bifid.

Colour olive yellow. Two dark streaks from the upper lip through the eye to the edge of the operculum. A double line of black spots on the posterior half of the trunk over the lateral line. The first two dorsal webs black. Fins orange red. A faint yellow line along the middle of the anal.

Length, $4\frac{1}{2}$ inches. Locality, Moreton Bay. Collected by Captain Townley, St. Helena.

LABRICHTHYS NUDIGENA.

Lat. 27.

A posterior canine. Scales of the cheeks in one infraorbital series. Canines $\frac{2}{2}$. Caudal subconvex. Tubules of lateral line simple. Height $4\frac{1}{3}$ in the total length.

Colour (dry) brownish grey, head and fins yellow. A broad ill-defined dark streak down the operculum. Each scale of the upper part of the trunk with a dark vertical streak. A black blotch on the middle of the upper side of the caudal peduncle.

Length, $4\frac{1}{2}$ inches. Locality, Barrier Reef.

TORRESIA LINEATA.

D. 13/7. A. 3/10. Lat. 27.

Height of the body $2\frac{1}{2}$, length of the head $3\frac{1}{4}$ in the length of the body, s.c. Orbit and snout each 4, interorbit $3\frac{1}{2}$ in the length of the head.

Four lower canines, the two laterals of the upper jaw minute. Upper profile tumid over the nape, the lower over the post abdominal region. Nape tubuliferous.

Colour yellowish brown, with numerous bluish longitudinal stripes on the trunk formed by the pearly centres of the scales. Head with four blue stripes diverging backwards over the cheeks and opercles, the lowest from the angle of the mouth to the chest. A black blotch on the dorsum extending on the base of the posterior third of the dorsal fin. In a second example the fish is uniform in colour except the dorsal blotch.

Length, 4 inches. Locality, Cardwell.

PSEUDOJULIS ZICZAC.

D. 9/12. A. 3/11. Lat. 28. Tr. 2/9.

The height of the body and length of the head each 4 in the total length. Caudal truncated. Ventrals produced beyond the origin of the anal. Brownish white. A broad dark band of ziczac markings (distinct when recent) from the snout below the eye to behind the soft dorsal. A salmon coloured stripe from the angle of the operculum to the abdomen. Blotches of the same on the cheeks and opercles. A longitudinal band of the same near the base of the anal. Dorsals very pale salmon with a central paler band. Base of caudal orange.

Locality, Murray Island. Collected by Mr. K. Broadbent.

PSEUDOJULIS MURRAYENSIS.

D. 9/11. A. 3/11. Lat. 27. Tr. 1½/8.

The height of the body and length of the head are each 4 in the total length. Caudal rounded, yellowish. A broad blackish band occupies the middle of the side of the body. A dark spot behind and before the eye and on the snout. Anal with four small bright black spots on each web. Dorsals with fainter spots more or less confluent on the spinous portion into oblique bands.

Locality, Murray Island. Collected by Mr. K. Broadbent.

CORIS CORONATA.

D. 9/11. A. 2/11. Lat. 55.

The height of the body and length of the head each $4\frac{1}{2}$ in the total length. Caudal rounded. Anterior dorsal spines low. Body with three or four broad faint ill-defined bands across the back, the first sometimes as though composed of large spots. This ends above in a dark spot on the anterior dorsal spines and a distinct band across the base of the pectoral. A spot before and behind the eye, one on the side and another near the rays of the nape. These form together a circle of spots around the head, but are sometimes replaced by small irregularly scattered spots on the head. Under parts pink, the base of the scales bearing each a pink triangle. The dorsal bands sometimes nearly obsolete, the pectoral band and soft dorsal ocellus constant.

Locality, Murray Island. Collected by Mr. K. Broadbent.

HETEROSCARUS TENUICEPS.

D. 14/9. A. 2/12. Lat. 36. Tr. 4/8. V. 1/4. P. 14.

The height of the body is $2\frac{1}{2}$, the length of the head 3 in the length, s.c. Orbit $4\frac{1}{2}$, snout and interorbit each $3\frac{1}{2}$ in the length of the head. Lower jaw with a median suture. Head naked, minutely rugose, profile sloping at a low angle from the dorsal and tumid over the orbit. Three series of scales on the operculum. Jaws equal. Preoperculum denticulated. Anterior dorsal spines not filamentose. Dorsal and anal sheathed at their base.

Colour, after long maceration in spirits, ferruginous with a few brown blotches. No markings discernible.

Length $2\frac{1}{2}$ inches. Received from the South Australian Institute.

In a second specimen the attenuation of the head is not so pronounced. The fish is evidently very near to *H. Castlenavi*, Maccl., but it has the normal number of anal spines, and the abnormal median suture in the lower jaw, and it has no trace of lines upon the head.

JULIS VENTRALIS.

D. 8/13. A. 2/10. Lat. 28. Tr. 3/9.

The height of the body is $3\frac{2}{3}$, the length of the head 4 in the length s.c. Orbit and interorbit each 4, snout 3 in the length of the head.

Head blue black with obscure green streaks, one above the eye to the lateral line, one from the snout touching the lower edge of the orbit and going to the base of the pectoral, the third produced from the lower edge of the body colour as a bright blue green streak to the subopercle, thence obscurely to near the angle of the mouth, where it curves down to meet its fellow of the opposite side on the chin, on which there is before it another transverse streak, from its centre a longitudinal streak runs along the median line of the belly. Between these three green lines the thorax and belly are of a copper red colour. Body green, each scale brownish at the base. Pectoral green with a broad chocolate band near its upper edge. Hinder part of spinous dorsal with a band of white-edged green spots at the base. A mesial chocolate streak extending forwards and a yellow marginal band. Anal chocolate at the base, green in the middle, yellow on the edge. Caudal yellow, lobes edged above and below with green, enclosing a reddish orange streak.

Length, 5 inches. Locality, Moreton Bay. Collected by Mr. G. Watkins, Dunwich.

Allied to *J. Aneitensis*.

JULICHTHYS, n.g.

Dorsal with eleven spines. A posterior canine. Scales of the thorax comparatively small. Cheeks and opercles nearly naked. Anterior canines $\frac{2}{2}$. Lateral line continuous.

JULICHTHYS INORNATA.

D. 11/11. A. 2/11. Lat. 28. Tr. 3/10.

The height of the body is $4\frac{1}{3}$, the length of the head $4\frac{1}{2}$ in the total length. Suborbital 4, orbit 5, interorbit 4 in the length of the head. Snout pointed, head attenuated. Cheeks with one series of pierced infraorbital scales. Operculum with one or two rudimentary

scales. Tail subtruncate. Dorsal spines gradually lengthening posteriorly. Lateral line deflected on the 20th scale. Tubules simple except the first three which are bifid.

Pale yellowish (dry). Trace of a black spot behind the orbit, of a curved mark from the angle of the mouth across the preopercle, of a bluish coloration on the opercle and a dark one on the sides of the trunk. A small dark spot on the base of the pectoral Scales of the posterior part of the body with one, occasionally two, dark brown dots, of the fore part below the lateral line each with a dark vertical streak.

Length, 6 inches. Locality, Barrier Reef.

PLATYGLOSSUS PUNCTATUS.

D. 9/11. A. 2/11. Lat. 30. Tr. 3/10.

The height of the body and length of the head are each $4\frac{1}{2}$ in the total length. Caudal rounded. Light pinky yellow, each scale of the upper parts with a small blue spot on the base. A blue edged pearly ? bar from the orbit to the snout. A dark blotch behind the orbit and a light crimson one below it.

Locality, Murray Island. Collected by Mr. K. Broadbent.

PLATYGLOSSUS AMABILIS.

D. 9/11. A. 3/11. Lat. 30. Tr. 3/10.

The height of the body and length of the head are each (nearly) 4 in the total length. Caudal rounded. Pale green. A pale violet bar from the snout through the eye over the operculum. A second from the angle of the mouth over the operculum, a third from the side of the chin over the suboperculum to the abdomen, a fourth along the chest and abdomen. A faint spot behind the orbit. Caudal largely tipped with rich violet and with a spot of the same on the upper part of its base.

Locality, Murray Island. Collected by Mr. K. Broadbent.

PLATYGLOSSUS EQUINUS.

D. 9/11. A. 2/10. Lat. 27. Tr. 2/8.

The height of the body is $4\frac{1}{2}$, the length of the head $3\frac{3}{4}$ in the total length. Caudal a little rounded. First ventral ray produced.

Lilac grey. A large oval white patch on the cheeks enclosing a horse shoe shaped dark edged blue band. A similar band from the orbit to the angle of the mouth. On the operculum a curved band edging the white patch and enclosing a blue dot in its upper rounded end, a dark blue patch on the angle. A ring on each side the nape, a horse shoe mark on the vertex. Body marbled with purplish brown on its upper part descending in broad irregular bands over the postabdomen. Soft dorsal with a series of pale spots along the base and a black blotch on the anterior rays and webs, traces of pale spots in rows on the spinous dorsal. Caudal with six brown bars across its middle rays. A deep blue axillary spot.

Length, $6\frac{1}{2}$ inches. Locality, Barrier Reef (Cardwell).

PSEUDOSCARUS FLAVIPINNIS.

D. 9/10. A. 3/9. Lat. 25. Tr. $1\frac{1}{2}$ /6.

The height of the body is $3\frac{1}{2}$ nearly, the length of the head 4 nearly, in the total length. Orbit 4, snout 3 in the length of the head. Three series of scales on the cheeks; one series on the lower limb of the preoperculum. Upper lip thin. Dental ridges slightly grooved and nicked on the edge. No corner tooth. Caudal subtruncate. Yellowish brown, paler beneath. The scales striated with brown, fins yellowish.

Locality, Cape York. Collected by Mr. K. Broadbent.

PSEUDOSCARUS STRIGIPINNIS.

Three series of scales on the cheeks, the lowest composed of five on the preopercular limb, the middle series composed of six scales. Upper lip narrow, leaving the jaw exposed. Jaws white without pointed teeth at the angle. Dorsal spines subequal in length. Pectoral with fourteen rays. Caudal short, truncate with three long jointed scales at the base. Grey, clouded with darker grey. Fins black, the caudal with alternating white longitudinal stripes equalling the black intervals in breadth. Dorsal, anal and pectoral, with irregular white lines and streaks in the direction of the rays. All the white streaks appearing as if laid on with pigment.

Length, 6 inches. Locality Cardwell.

PSEUDOSCARUS FUSCUS.

Two series of scales on the cheek and two scales on the lower preopercular limb; the middle series composed of five scales. Upper lip broad. Jaws whitish with pointed teeth at the angle. Thirteen pectoral rays. Caudal lobes prolonged. Uniform brownish olive, vertical fins darker. Caudal white on its posterior edge.

Length, 10 inches. Locality, Barrier Reef.

NOTE ABOUT THE TEMPERATURE OF THE SEA
WATER ALONG THE EASTERN COAST OF AUSTRALIA,
OBSERVED IN JULY 1878 AND 1883.

BY N. DE MIKLOUHO-MACLAY.

Having found a complete absence of published records of observation of the temperature of sea water on the Coasts of Australia, I venture to submit to the Society these very limited observations, hoping that they may be of some use for Zoologists who are interested in the geographical distribution of marine animals.

On my way from Singapore to Sydney in 1878, it appeared interesting to me to observe the temperature of the sea water as we were steaming near the coast of Australia. I used to do it every day at noon with a very exact thermometer of Grainer in Berlin (well compared with the Standard Thermometer of the Meteorological Observatory of Batavia), leaving the same each time over ten minutes in the bucket of sea water, which was hauled up from the sea just before the observation.

Before submerging the thermometer in the water, it was left suspended for half-an-hour or more in a shady place under the awning, to ascertain the temperature of the air.